

NC/QC/DD/2019-20/W14-PH-W4

Date: 08-11-2019

TEST REPORT ON WET MIX MACADAM MIX

(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.

{Project*: Filling pot holes in main and cross roads in Bagalagunte ward no. 14.}

Ref.: Material testing/QC/19-20.

Report Required for: Assistant Executive Engineer,

Bagalagunte Sub Division,

BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. N. Umesh, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	100.00	100
45.00	96.70	95-100
26.50	---	-
22.40	68.45	60-80
11.20	49.30	40-60
4.75	29.10	25-40
2.36	22.95	15-30
0.600	11.60	8-22
0.075	3.95	0-5

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Proprietor



NC/QC/DD/2019-20/W14-PH-BB1

Date: 26-11-2020

1. TEST REPORT ON BITUMEN SAMPLE:

Sub: Testing of Bitumen sample VG-30 Grade.

{Project*: Filling pot holes in main and cross roads in Bagalagunte ward no. 14.}

Ref.: Material testing/QC/19-20.

Report Required for: Assistant Executive Engineer,
Bagalagunte Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. N. Umesh, Bangalore.

Technical Reference: Ministry of Road Transport and Highways, V Revision, 2013 and IS 73: 1992.

TABLE 1.1 :

SL No	Details	Test Results	Requirements as per I.S 73 -1992 Specifications
1.	Penetration at 25 ⁰ C	50.30 ⁰ C	Min. 45
2.	Ductility Value at 25 ⁰ C	103.0 cm	40
3.	Flash point	236 ⁰ C	Minimum 220 ⁰ C
4.	Softening point	50.70 ⁰ C	Min. 47

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NC/QC/DD/2019-20/W14-PH-CB1

Date: 26-11-2020

1. TEST REPORT ON COARSE AGGREGATE:

Sub: Testing of Coarse Aggregate used in Bituminous Concrete.

{Project*: Filling pot holes in main and cross roads in Bagalagunte ward no. 14.}

Ref.: Material testing/QC/19-20.

Report Required for: Assistant Executive Engineer,
Bagalagunte Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. N. Umesh, Bangalore.

TABLE 1.1 :

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)- 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	22.97 %	Not more than 24.00 %
2.	Combined Flakiness and Elongation index, %	27.64 %	Not more than 35.0 %
3.	Water absorption, %	0.40 %	Not more than 2.0 %
4.	Specific gravity	2.62	-----
5.	Soundness	5.41 %	Max. 12 % in Sodium Sulphate

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NC/QC/DD/2019-20/W14-PH-BC1

Date: 03-12-2020

1. TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.
{Project*: Filling pot holes in main and cross roads in Bagalagunte ward no. 14.}

Ref.: Material testing/QC/19-20,

Report Required for: Assistant Executive Engineer,
Bagalagunte Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. N. Umesh, Bangalore.

TEST RESULTS

A. Type of Construction : Bituminous Concrete

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = 5.40 %

2. Gradation Test

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specifications- 2013 BC (Grading - 2)
19.0	100	100
13.2	98.30	90-100
9.5	85.95	70-88
4.75	71.05	53-71
2.36	49.80	42-58
1.18	37.20	34-48
0.600	29.65	26-38
0.300	24.10	18-28
0.150	13.90	12-20
0.075	8.45	4-10

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NC/QC/DD/2019-20/W14-PH-BS1

Date: 03-12-2020

1. TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

{Project*: Filling pot holes in main and cross roads in Bagalagunte ward no. 14.}

Ref.: Material testing/QC/19-20,

Report Required for: Assistant Executive Engineer,
Bagalagunte Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. N. Umesh, Bangalore.

TEST RESULTS**Table 1: Properties of BC (Gr-2) Mix**

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1361	900
2	Marshall Flow at 60°C, mm.	3.42	2.0 - 4.0

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NC/QC/DD/2019-20/W14-PH-BC2

Date: 09-12-2020

TEST REPORT ON BITUMINOUS MIXES :**(BITUMEN EXTRACTION TEST & GRADATION TEST)**

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

{Project*: Filling pot holes in main and cross roads in Bagalagunte ward no. 14,}

Ref.: Material testing QC 19-20,

Report Required for: Assistant Executive Engineer,

Bagalagunte Sub Division,

BBMP, Bangalore,

Name of the Agency/Contractor*: Sri. N. Umesh, Bangalore.

TEST RESULTS**A. Type of Construction : Bituminous Concrete**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = 5.42 %

2. Gradation Test**TABLE 1.1**

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specifications- 2013 BC (Grading - 2)
19.0	100	100
13.2	98.35	90-100
9.5	80.10	70-88
4.75	69.95	53-71
2.36	54.60	42-58
1.18	41.85	34-48
0.600	33.90	26-38
0.300	19.55	18-28
0.150	14.05	12-20
0.075	6.15	4-10

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NC/QC/DD/2019-20/W14-PH-BS2

Date: 09-12-2020

1. TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

{Project*: Filling pot holes in main and cross roads in Bagalagunte ward no. 14.}

Ref.: Material testing/QC/19-20.

Report Required for: Assistant Executive Engineer,
Bagalagunte Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. N. Umesh, Bangalore.

TEST RESULTS**Table 1: Properties of BC (Gr-2) Mix**

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1374	900
2	Marshall Flow at 60°C, mm.	3.47	2.0 - 4.0

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